

# **ESPC ENABLE Overview and Training**

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# **Agenda**

- > FEMP Mission
- > ESPC ENABLE Overview
- Comparison of Project **Funding Options**
- > ESPC ENABLE Process
- Program Status
- > Eligible ESCOs
- > Enterprise Approach
- Next Steps
- > FEMP Assistance
- Questions



#### **FEMP Mission**

The U.S. Department of Energy's
Federal Energy Management Program (FEMP)
works with key individuals to accomplish energy
change within organizations, by bringing expertise
from all levels of project and policy implementation,
to enable Federal agencies to meet energy-related
goals and to provide energy leadership to the
country.

#### What are ESPCs?

Contracts that allow agencies to do energy projects with no upfront capital cost and no special appropriations from Congress

Energy Service Company (ESCO)

- Provides development and installation of energy and water conservation measures
- Guarantees resulting cost savings sufficient to cover project costs
- Acquires financing

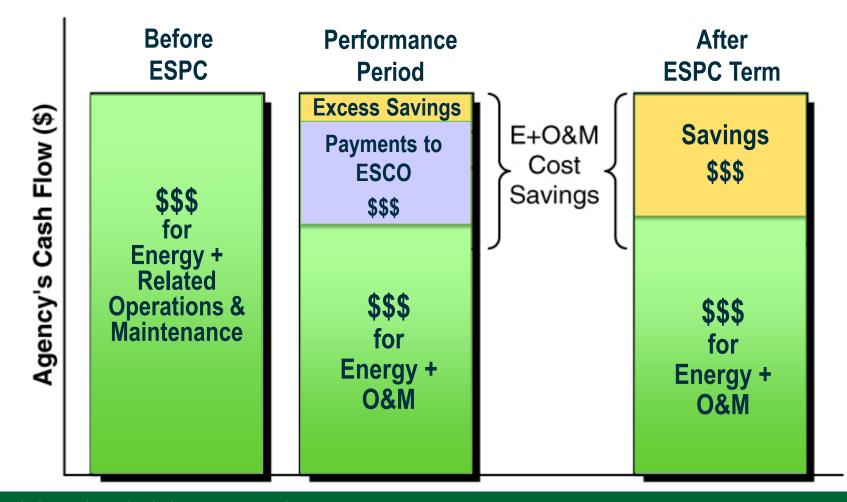
**Agency** 

- Pays ESCO over term of contract from guaranteed cost savings
- Contract administration→life of contract

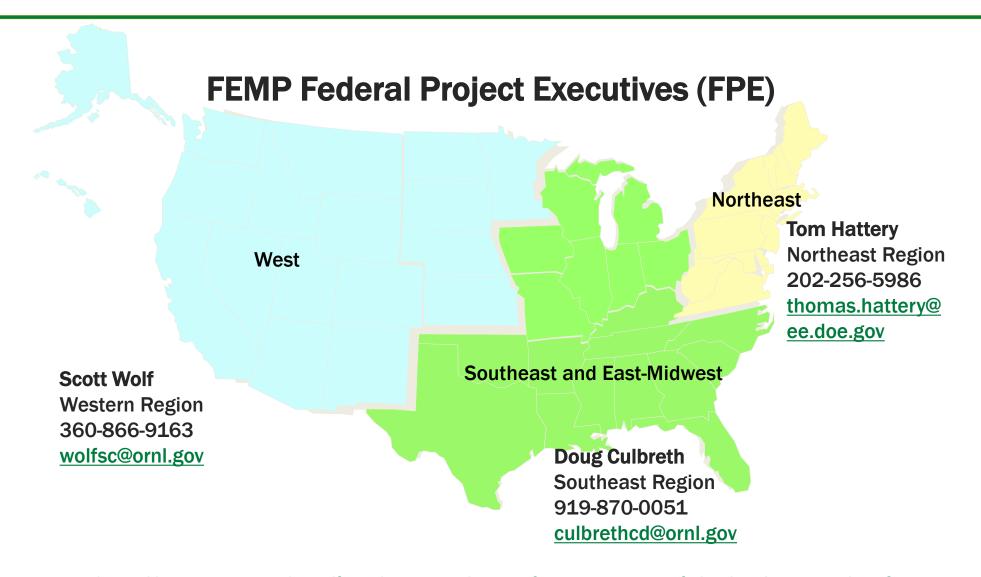
# **ESPCs are Budget-Neutral**

#### Reallocate the Government's Utility Bill:

◆ Stop paying for waste and pollution ◆ Start paying for efficiency ◆



# **DOE FEMP Project Contacts**



https://www.energy.gov/eere/femp/energy-savings-performance-contract-federal-project-executives-0

### **ESPC ENABLE Contacts**

Roles/Responsibilities	Contact Information
ESPC ENABLE Program Manager	Ira Birnbaum - DOE-FEMP 202-287-1869 ◆ Ira.Birnbaum@ee.doe.gov
Federal Project Executives	Doug Culbreth - ORNL 919-610-8259 ♦ culbrethcd@ornl.gov Tom Hattery - ORNL 202-256-5986 ♦ Thomas.Hattery@ee.doe.gov Scott Wolf - ORNL 360-866-9163 ♦ wolfsc@ornl.gov
Audit Tool, Energy/Water Savings, Finance	Christine Walker - ORNL 865-241-4896 ◆ walkerce@ornl.gov
Acquisition Process and Contract Documents	Sam Espinosa - BGS 505-463-0942 ◆ samespinosa@comcast.net
Support Contractor	Matt Roney - BGS 603-828-7512 ◆ mroney@bgs-llc.com

https://energy.gov/eere/femp/espc-enable

#### **ESPC ENABLE Overview**

#### **ESPC ENABLE** is an alternative energy performance contracting program:

- Intended for smaller projects at federal facilities (underserved market)
  - Or where ENABLE presents the best or only option for the agency to fund a project
  - Is suitable for Federal facilities with buildings under 200,000 square feet
  - Project size \$200k \$18.5 million
  - No fixed minimum or maximum facility or \$ size
- Standardized and streamlined process to quickly award projects and realize savings using the GSA Supply Schedule SIN 334512
  - Templates, IGA tool
  - No preliminary assessment
- Targets straight-forward ECMs including lighting, water fixtures, basic HVAC controls, HVAC equipment replacement including boilers and chillers, solar PV
  - Other ECMs available under "hybrid" projects
- Prescribes basic levels of measurement and verification (M&V) for each ECM
  - Primarily Option A
  - Solar PV and chillers use Option B

# **ESPC ENABLE: ECM Summary**

ECM	Included	Outside IGA Tool
Lighting	<ul> <li>Lamps, Ballasts, Fixtures</li> <li>Controls: Occupancy, Day lighting (on/off, dimming)</li> </ul>	Solar Lighting (off-grid installations allowed)
Water	<ul> <li>Sanitary plumbing fixtures: sinks, toilets, urinals, showers</li> <li>Irrigation</li> <li>Leak repair</li> <li>Domestic/commercial hot water heaters</li> <li>Water based appliances: dishwasher, ice machine, clothes washer, etc.</li> </ul>	<ul> <li>Heating/Cooling system improvements (cooling towers, once through cooling, condensate reclaim)</li> </ul>
HVAC Controls	<ul> <li>Whole building control strategies including:</li> <li>Time/Temperature Set-back</li> <li>Demand/Night Ventilation</li> </ul>	<ul> <li>Advanced Controls <sup>1</sup>: Energy Management Control Systems (EMCS) / Building Automation Systems (BAS)</li> </ul>
HVAC Equipment	Basic whole building/system one-for-one replacement <sup>2</sup> of:  Window AC units / Electric Baseboard heat  Split AC/Furnace  Heat Pumps  Packaged Terminal Air Conditioner (PTAC)  Packaged Single Zone Air Conditioner (PSZ)  Roof Top Units (RTU)  Single building Boiler/Chiller	<ul> <li>Central Boiler/Chiller Plants</li> <li>Retro-commissioning based activities</li> <li>Non-building related heating/cooling/ventilation</li> </ul>
Solar PV	<ul> <li>Ground, Roof, Parking Canopy mount</li> <li>Fixed and Tracking Arrays</li> <li>Grid Tied and Off-grid</li> </ul>	<ul><li>Solar Thermal (Hot Water)</li><li>Hybrid PV/Hot water systems</li></ul>

- 1. Advanced Controls may be considered; however, savings calculations within the ENABLE IGA tool are limited to time/temp set-back, demand/night ventilation
- 2. Current ENABLE IGA tool is presently configured to model one-for one replacement of whole system(s) across an entire building with "like" systems (ex: replace (3) RTU's with (3) higher efficiency RTU's.) IGA Tool not presently configured to model partial replacement of building HVAC systems or replacement/modification of sub-systems (ex: VFD's on select fan units).

# **ESPC ENABLE: Hybrid Approach**

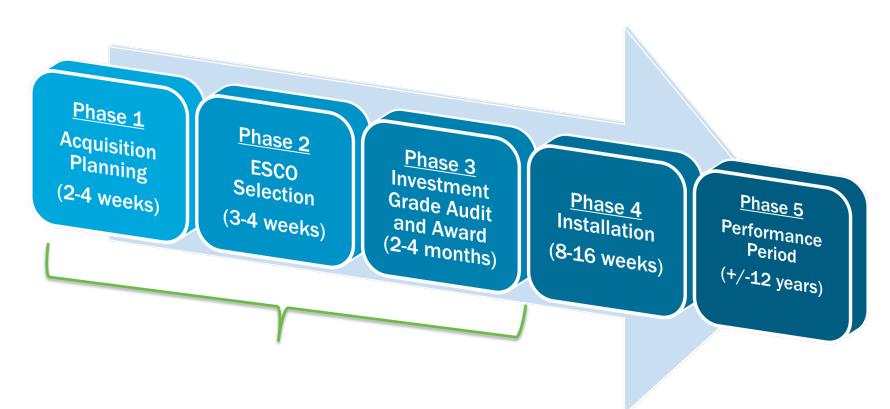
Projects may combine the ESPC ENABLE ECMs with other ECMs available under GSA Supply Schedule SIN 334512 under a hybrid approach:

- Would fall under same award; no need for different funding
- Agency and ESCO must come to agreement about how ESCO will calculate guaranteed savings outside IGA Tool for non-ENABLE ECMs; ESCO must also propose an M&V methodology for non-ENABLE ECMs
- Your NOO should state that ESCO must demonstrate capability to do this for your particular ECMs
- FEMP ENABLE team will review ESCO savings and cost estimates and M&V plans
- ENABLE plans to expand the IGA Tool to address some ECMs currently outside of ENABLE, such as motors; until then these ECMs would be treated under a hybrid approach
- Note that FEMP cannot provide the same level of confidence for non-ENABLE ECMs' savings as for ECMs run through IGA Tool

# **Comparison of Project Funding Options**

	DOE ESPCs	ESPC ENABLE	UESCs
Contract type	TOs under DOE IDIQ	GSA Supply Schedule SIN 334512	Task Order issued under a GSA Area-wide contract; Basic ordering agrmt.
Private-sector partner	ESCOs: 21 on IDIQ	ESCOs on GSA Supply Schedule SIN 334512: 24 ESCOs - 7 small business, 12 on IDIQ	Serving utility company
Eligible facilities	Federal buildings worldwide	Federal buildings worldwide	Where government pays utility bill including leased buildings; where offered/authorized
Project size	\$2 million or larger	No fixed size or \$ limits; suitable for smaller projects	Any
ECMs	Unlimited	Lighting, water, basic HVAC controls, HVAC equip. incl. boilers & chillers, solar PV; motors being added	Unlimited
Savings guarantees and M&V	Required	Required; simplified M&V	Performance assurance ( <u>or</u> savings guarantees) and M&V through commissioning or retrocommissioning required for annual scoring
O & M	ESCO responsible; tasking negotiable	Government or ESCO; ESCO provides training	Negotiable
Preliminary assessment and IGA Requirement	Both PA and IGA required	Only IGA required	PA recommended; IGA required
FEMP ESPC Life of Contract Service	Included	Not included	Not applicable
Use Fee	none	\$7,500 for each \$1M contract value – paid by ESCO to GSA	none

### **ESPC ENABLE: Process Cycle**



- Projects typically awarded in about 6 to 12 months
- Energy/cost savings in 8-12 months

# **ESPC ENABLE Process, Acquisition Planning**

Acquisition Planning

#### **Activities: Estimated timeline – 2-4 Weeks**

- Essential members of the acquisition team are identified
- Agency hosts kickoff meeting with acquisition team members
- Agency procures Project Facilitator
- Agency develops an Acquisition Plan\*
- Agency develops the Request for Quotation/Notice of Opportunity\*

\*Indicates FEMP-provided template

### **ESPC ENABLE Process, ESCO Selection**



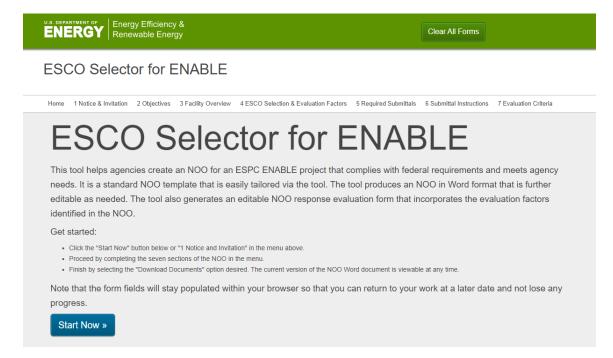
#### **Activities: Estimated timeline – 3-4 Weeks**

- Request for Quotation/Notice of Opportunity is released
- ESCOs expression of interest (EOI)\*
- Agency evaluates responses based on best value criteria outlined in the RFQ/NOO\*
- Agency notifies unsuccessful offerors\* and issues the notice of intent to award (NOITA)\*

\*Indicates FEMP-provided/required template

#### **Use the ESCO Selector for ENABLE Tool**

- New web-based tool to help agencies create a Notice of Opportunity (NOO)
  - Uses the FEMP ESPC ENABLE templates
  - Produces an editable NOO in Microsoft Word
  - Generates NOO response evaluation forms



https://esco-selector-enable.ornl.gov/

#### **ESCO Selector for ENABLE**

- Step-by-step instructions
- Downloadable documents

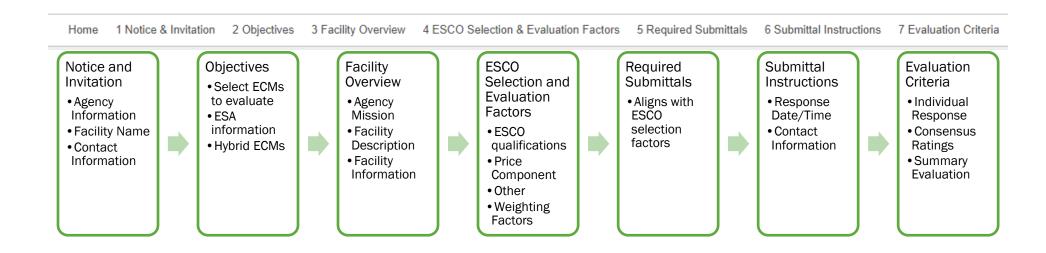
NOO
NOO Populated

Evaluation Template Individual
Evaluation Template Consensus
Evaluation Templates Summary
Evaluation Templates Instructions-Definitions

Download Documents •



#### ESCO Selector for ENABLE



### **General Best Practices for an Effective NOO**

 Use the ESCO Selector for ENABLE tool to quickly create a fully editable draft NOO that complies with federal requirements and meets agency needs:

https://esco-selector-enable.ornl.gov/

- Also available for download and editing: ENABLE Notice of Opportunity
   (NOO) Template: <a href="https://www.energy.gov/eere/femp/downloads/espc-enable-request-quotenotice-opportunity-template">https://www.energy.gov/eere/femp/downloads/espc-enable-request-quotenotice-opportunity-template</a>
- Involve your FEMP Federal Project Executive in drafting NOO
- Keep NOO as broad as possible to allow ESCO to propose comprehensive, innovative solutions using standard ECMs

# **General Best Practices (cont.)**

- Ask ESCOs to provide examples of familiarity with any nonstandard ("hybrid") ECMs you would like to consider
- Identify two or three site-specific needs or wish-list items, such as renewable ECMs. ESCO responses will allow agencies to match ESCO capabilities with site needs

# Require the ESCOs' responses to the NOO to include description of the following:

- ESCO's management approach (how they're going to get the job done)
- The ESCO's approach to developing energy baselines and the M&V approach for this project

### **Evaluation Factors and Selection Criteria**

- Each ESCO response must address the ESCO's Qualifications, Past
  Performance, and a Price Component, plus any other requirements the
  agency deems necessary, such as experience working with local
  subcontractors; or, where applicable, experience with projects in coastal,
  maritime and/or island locations.
- Keep evaluation factors and selection criteria to the minimum necessary.
   Evaluation factors should be weighted to reflect the agency's priorities,
   rather than all factors being weighted equally.
- Weight Qualifications more heavily than Past Performance, because ENABLE is still a relatively new program and not all ESCOs will be able to report Past Performance under ENABLE

### **Evaluation Factors and Selection Criteria (cont.)**

- Weight the Price Component less heavily than ESCO Qualifications.\*
   ESCO has not yet walked the facility(ies) and can only rely on the data provided with the NOO.
- Require ESCO to demonstrate ability to obtain low-cost financing, reflecting:
  - Interest rate index and spread of last 3 projects, with term and size of loan
  - Whether ESCO has Master Purchase Agreement with at least one financier
  - Any credit ratings issued by Moody's, S&P, or Fitch
  - Whether ESCO is covered under a parent company guarantee
  - Who underwrites ESCO's performance/payment bond, and that firm's credit rating

\*See end of next slide for exception.

# **Evaluation Factors and Selection Criteria (cont.)**

#### More Best Practices for Price Component:

- For the ECMs likely to be included in project, require ESCO to estimate the extent to which work will be self-performed vs. subcontracted (%)
- Require ESCO to describe methods, procedures used to obtain competitive prices on ECMs and financing
- Projects with a single or predominant ECM can select ESCO based on anticipated project price by including price component of unit installed cost, e.g., \$/kWh for solar PV, or \$/installed LED fixture. In these cases, weight price component more heavily.

# **ESPC ENABLE Process, IGA to Award**

IGA and Award

#### **Activities: Estimated timeline – 2-4 Months**

- Agency prepares Scope of Work (SOW)\*, then hosts
   Investment Grade Audit (IGA) kickoff meeting
- ESCO performs IGA using FEMP-provided survey tools\*
- ESCO submits final proposal\*, final negotiations occur
- Agency awards task order\*

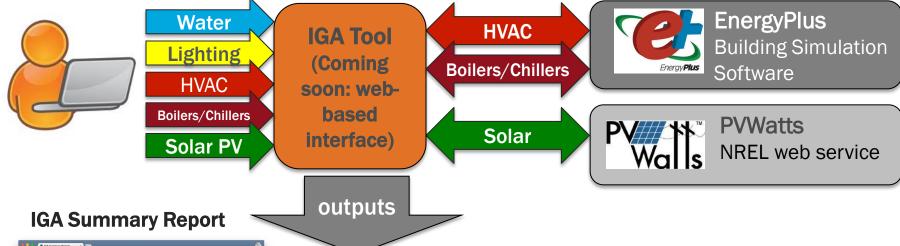
\*Indicates FEMP-provided template

### **ENABLE Investment Grade Audit (IGA) Tool**

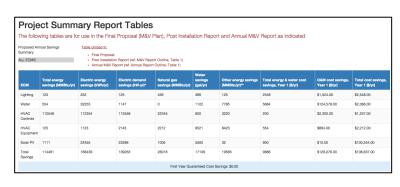
- Intended Users: ESCOs
- Purpose:
  - Standardize energy and cost savings methodology across the set of ENABLE ECMs.
  - Standardize outputs for inclusion in prescribed final proposal outline.
- Intention: Minimize need for customer's technical review of proposals
- Functionality:
  - The tool will be used to identify pre- and post-retrofit conditions and estimate energy and cost savings for the project via embedded equations, Energy Plus and PV Watts.
  - Generates a Summary Project Report
  - Generates outputs that form the basis for contract documents
    - Summary data tables by ECM for M&V Plan
    - Completed TO Schedule #4 (data needed for entry into ePB)
    - ECM equipment summaries (quantities by type)



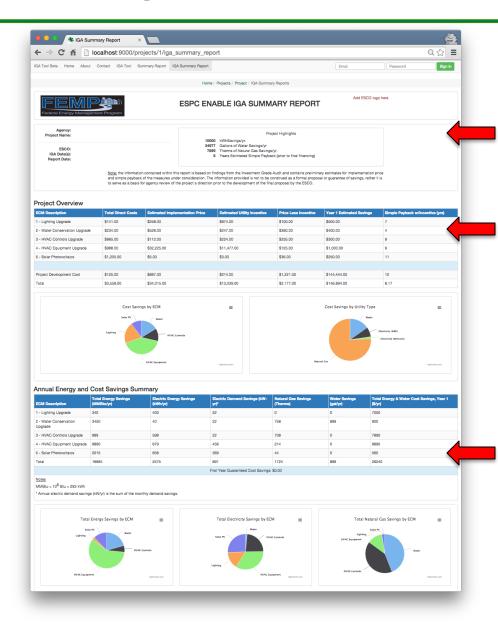
### **ENABLE IGA Tool**



- Energy and Cost Savings Tables (M&V Plan)
- Financial TO Schedule #4 (TO-4)
- ECM Equipment Summaries



# **IGA Summary Report**



#### **High Level Project Details**

- Total kwh, Gal. Water, Therms
- Simple Payback (before financing)

#### **ECM** level detail on:

- Direct cost
- Estimated Implementation Price
- Incentives
- Cost Savings by Utility Type
- Simple Payback

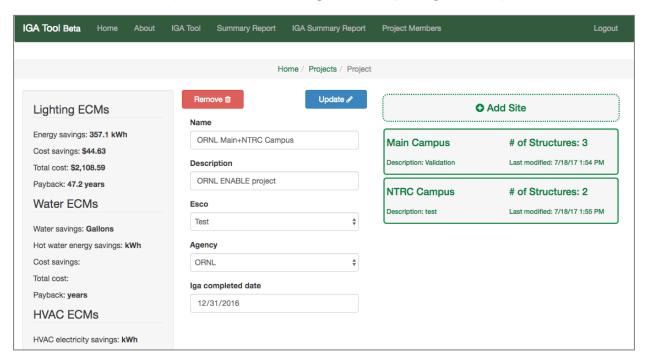
#### **ECM** level detail on:

Energy savings by utility type

Submitted to the agency prior to final proposal

### **Coming Soon! Web-based ENABLE IGA Tool**

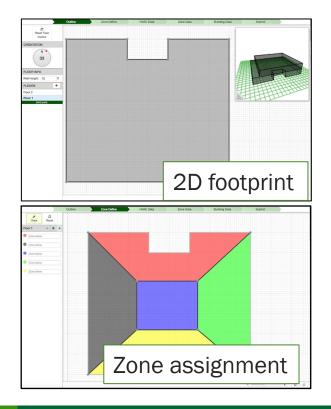
- Moving from Excel to web-based interface
- Similar to eProject Builder
- Allows for multiple project sites under one project
- Additional ECMs Boilers and Chillers
- Ability to add "other" ECMs (ENABLE Hybrid projects)



### **Improved Building/Equipment Representation**

# Enhanced tool interface to allow for 2D and 3D representation of building floors and heating/cooling zones.

- Allows for more complex HVAC, boiler and chiller scenarios
- Can represent buildings with multiple/dissimilar HVAC systems
- Assignment of equipment by zone





# **ESPC ENABLE Process, Installation and Acceptance**



#### **Activities: Estimated timeline – 8-16 Weeks**

- Installation
- Commissioning\*
- Measurement and Verification (M&V)\*
- Agency Acceptance\*

\* Indicates FEMP provided plan templates and report outlines

# **ESPC ENABLE Process, Performance Period**

Performance Period Activities: Annual M&V audit performed to verify achievement of annual cost savings

- ESCO or agency must perform annual audit
- Equipment inspections are performed as prescribed in the M&V plan to verify savings achievement
  - Primarily Option A (Option B for solar PV and chillers)
- An annual M&V Report\* is generated by the ESCO and submitted to the agency

<sup>\*</sup> Indicates FEMP provided report outline

# **ESPC ENABLE: Available Templates by Phase**

Acquisition Planning

ESCO Selection

IGA and Award

Installation

Performance Period

- Acquisition
   Plan
- Request for Quotation/ Notice of Opportunity (RFQ/NOO)
- ESCO
  Expression of Interest
- Unsuccessful Offerors Letter
- Notice of Intent to Award (NOITA)

- Scope of Work (SOW)
- Final Proposal
- Task Order award

- Commissioning
- M&V Plan
- Agency Acceptance
- M&V Report (Outline)

https://energy.gov/eere/femp/espc-enable-procurement-process

### **ESPC ENABLE: Program Status as of December 2021**

#### **ESCOs in the Program**

- 24 qualified ESCOs under GSA Supply Schedule
  - Seven Small Business contractors
    - Two Service-Disabled Veteran-Owned Small Business contractors
  - Twelve IDIQ contractors

#### **Project Status**

- 22 projects awarded: USAF, USN, USACE, GSA (6), USFS (4), State Dept, CBP, BoP, DOE HQ, DEA, ICE, NOAA, NIST, FAA (\$0.2-\$18.5m)
  - 2 solar PV projects under ESPC ESA
  - Awards have gone to 5 small business ESCOs (including 2 Disabled Veteran ESCOs), 7 ESPC IDIQ ESCOs
- Multiple projects underway (Pipeline: 9 projects, 8 agencies)
- Scopes range from one to multiple ECMs

# ESPC ENABLE: Eligible ESCOs as of December 2021

ABM Facility Support Services	*	Legatus6	**
AECOM Technical Services	*	Leidos, Inc.	*
AMERESCO Federal Solutions	*	M.C. Dean	
<b>Brewer-Garrett Co</b>	*	METCO Engineering	**
Constellation NewEnergy	*	Orion Energy Systems	
CTS Group		Pacific Lighting Management	**
CTI Energy Services	**	Siemens Industry	*1
Energy Systems Group	*	SitelogIQ Government Solutions	
ENGIE Services U.S.	*	Trane U.S.	*
Green Generation Solutions	**	Utility Systems Solutions	**
Honeywell International	*	Williams Electric Co	
Johnson Controls	*	Woodstone Energy	**

<sup>\* =</sup> DOE IDIQ ESPC ESCO

<sup>\*\* =</sup> Small Business

<sup>&</sup>lt;sup>1</sup> Same parent company as IDIQ contractor

#### **ENTERPRISE APPROACH: WHAT AND WHY?**

### What is an Enterprise Approach?

 An effort to integrate and align the project development and approval process across organizations' various administrative and operational units.

### Why Develop an Enterprise Approach?

Agencies can award more and larger projects, with shorter development times,
 than agencies that follow a standard project-by-project approach.

#### **BENEFITS OF AN ENTERPRISE APPROACH**

- Set and enforce policies and goals agency-wide
- Add clarity in an ambiguous decision-making setting
- Provide centralized go-to resource for navigating ESPC process
- Promote consistency across the agency by reducing inter-regional differences in interpretation of the same rules and guidance
- Reduce burden on local facility staff who may be unfamiliar with ESPC process

### **ESPC ENABLE: Next Steps**

- Call or email your FEMP Federal Project Executive
- Identify potential project sites
- Assemble acquisition team
- Project kick-off meeting
- Procure Project Facilitator
  - DOE procurement via GSA Schedule <u>871 211</u>, with IAA to reimburse DOE
  - Agency procurement via GSA Schedule or other (DOE model SOW is available)
- Develop acquisition plan
- Develop and issue Notice of Opportunity (NOO)
- Select ESCO
- Develop Scope of Work (SOW) document
- IGA kick-off meeting with ESCO



National Institute of Standards and Technology (NIST) 5 MW-DC solar PV array in Gaithersburg, MD. Awarded as an ESPC energy sales agreement under ENABLE. *Photo courtesy of NIST* 

#### **FEMP Assistance**

#### **FEMP Resources Available to Federal Customers**

- Assistance to build an ENABLE program
- Tools and guidance to train, educate, and motivate
- Project management support to guide you through the ESPC ENABLE process\*
- Procurement subject matter experts to support project execution\*
- ESPC ENABLE webpage resources, including training http://energy.gov/eere/femp/espc-enable

\*Note: Project Facilitators are optional. Agencies may procure PFs directly or via DOE/FEMP. If via FEMP, agencies must sign an inter-agency agreement (IAA) with FEMP stipulating that the agency will either reimburse FEMP via up-front payment, or via guaranteed savings built into the project contract.

### **Questions?**



#### **More information on ENABLE:**

- Contact your Federal Project Executive
- ENABLE Homepage
- Project Development Process
- Eligible ESCOs
- Awarded Projects

#### Ira Birnbaum

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